

THE GREAT GREY KANGAROO (*MACROPUS GIGANTEUS*) AND ITS ALLIES.

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(Plates xxi-xxii.)

Some confusion exists as to the relationship between the kangaroos belonging to the *Macropus giganteus* group; these are the Great Grey Kangaroo, the Tasmanian Kangaroo, the Black-faced or Mallee Kangaroo, and the Kangaroo Island Kangaroo.

Field observations, the study of many specimens that have passed through the Zoological Gardens of Sydney and Melbourne, together with examination of skins and skulls in the Museums of Sydney, Adelaide and Hobart, have enabled me in some measure to present this group in its right order (1). Mr. Oldfield Thomas (2), while admitting the difference between *Macropus giganteus* and *M. melanops*, considered the latter merely a sub-species, and apparently without having seen a specimen of the Kangaroo Island Kangaroo he thought (3), that it was identical with the Tasmanian Kangaroo. Swartz, in his admirable treatise on the genus (4) based on the specimens in the museums of Tring and London in 1910, and the literature to that date, maintains the same arrangement.

Body measurements of male kangaroos are not always reliable, as they seem to grow throughout their life, so aged specimens may reach a size that is much beyond the average. The females are a more reliable guide in this respect.

The typical females and adult males of *Macropus giganteus* of Eastern Australia are covered with a long, rather coarse hair, under which is a varying amount of woolly fur. The latter is thick and close in winter, and thin in summer. Ordinarily they are grey above with lighter under parts in autumn and winter, becoming darker, more evenly coloured, and suffused with brown, as the longer coarse hair becomes more prominent. The back of the ears is clothed with coarse hair.

In aged males the hair is short; in autumn they grow a downy woolly fur; this is more or less replaced in summer with a short, closely adpressed hair.

The western form, which is browner in general colouration, was separated by Gould as *Macropus ocydromus*; it is, however, merely a colour variety. It may stand as *Macropus g. ocydromus*.

Macropus giganteus is a forest animal living usually in the open timbered country, seldom more than two or three hundred miles from the coast. It is gregarious, being found in mobs of from 6 to 60.

The Tasmanian Kangaroo (not *Macropus fuliginosus*, of Kangaroo Island), is the same species, but with somewhat coarser fur and showing greater variation in colour. The colour of the upper parts may be sooty, sooty-grey, rusty-brown or rusty-red (Lord). As a rule the colour is rusty-brown with the under parts greyish. The skull and body measurements are the same as in the typical form. This I designate as *Macropus giganteus tasmaniensis*.

Mr. Oldfield Thomas in speaking of *Macropus giganteus*, var. *melanops*

(1) My thanks are due to Dr. Anderson, Director of the Australian Museum, for permission to examine specimens, and to the Director of the Museums in Adelaide and Hobart for data supplied.

(2) Cat. Mars. and Monot. Brit. Mus., p. 20.

(3) Ibid., p. 19.

(4) Nov. Zool., 17, 1910, p. 86.

states (5) "Similar to *M. giganteus* in all essential characters but much smaller, more lightly built and darker coloured." Having paid particular attention to this species for many years I find that these characters are constant, and that as the animal differs also in habitat and habits, I consider that it should rank as a full species.

Actual measurements of Kangaroos of different ages are apt to be misleading. In my experience *Macropus melanops* is from one-fifth to one-fourth smaller than *M. giganteus*; the body proportions are also more slender (one might state that the difference is much the same as between the Deer Hound and the Grey Hound). The hair is shorter and finer; the hair on the back of the ears in the females and young males is very short, fine and closely adpressed, light fawn grey in colour, with a sharp line of demarcation from the hair of the head; in the adult and aged males the backs of the ears are blackish and almost bare. In Eastern and Southern Australia the body colour is dark chocolate; in the West it is more greyish; the chest is generally quite white in winter.

Macropus giganteus and *M. melanops*, although often found in the same districts, do not inhabit the same type of country; *giganteus* lives in the open forest, while *melanops* keeps to the scrub and the long grass, living in much thicker cover. Both may come into the same open spaces in the evening to feed. I have never known them to interbreed. *Melanops* is confined to the drier inland country and is not found near the coast. When surface water fails in any given locality, *giganteus* has to move on, but *melanops* remains, getting moisture from the bark and roots of shrubs. It is not gregarious like the larger animal, but is usually found in pairs. The males are more aggressive, and when chased by a dog they soon back up against a tree and put up a very good fight.

The Kangaroo found on Kangaroo Island, which has hitherto been considered to be the same as that from Tasmania, is a distinct species, described by Desmarest (6) as *Kangarus (Macropus) fuliginosus* in 1817.

Mr. Oldfield Thomas in speaking of *Macropus giganteus*, var. *fuliginosus* states (7) "The original habitat of this form was stated to be Kangaroo Island, South Australia, where Desmarest states, but with some doubt, that it was obtained by Peron and Lesueur. This doubt is confirmed by the fact that (*vide* Gould) it does not exist on Kangaroo Island, and by its common occurrence in Tasmania, where these collectors spent a considerable time." When Mr. Troughton visited the Island in 1921, on behalf of the Australian Museum, he found the animal fairly common, and secured several specimens. A comparison of these skins with the descriptions of the originals in the Paris Museum, shows them to be identical. The body and skull measurements given herewith show that *Macropus fuliginosus*, of Kangaroo Island, is distinct from *M. giganteus* and from the Tasmanian Kangaroo.

The Kangaroo Island Kangaroo, while clearly belonging to the *Macropus giganteus* group, is rather short and squat, having more the appearance of a wallaroo. The hair is long and coarse, and the colour ranges from almost black with a white chest in winter, to smoky chocolate with a greyish chest in summer. The face, outer side of the fore limbs, extremities of hind limbs and the end of the tail are darker. The inner side of the fore limbs and the legs all round are greyish-white.

Mr. Troughton found these animals living in small mobs in thick prickly acacia scrub.

(5) Cat. Mars. and Monot. Brit. Mus., p. 20.

(6) N. Diet. d'H.N., (2) XVII., p. 35, 1817.

(7) Cat. Mars. and Monot. Brit. Mus., p. 19.

COMPARATIVE BODY MEASUREMENTS IN MILLIMETRES OF *MACROPUS GIGANTEUS*; *M. TASMANIENSIS*; *M. FULLIGINOSUS*.

	Head and Body.	Tail	Hind Foot	Tibia.
<i>Macropus giganteus</i> .				
British Museum ♂	1500	920	337	
Taronga Park ♂	1120	830	325	460
Australian Museum—				
M 3234 ♀	770	695	304	410
<i>Macropus g. tasmaniensis</i> .				
British Museum ♂	1350	1000	359	555
Hobart Museum	1400	1000	380	437
D 602	1230	970	360	
<i>Macropus fuliginosus</i> .				
Australian Museum—				
S 1557 ♀	917	640	270	325
M 2816 ♂	1091	950	319	390
M 2818 ♂	869	661	280	330
M 2819 ♂	554	740	264	355

COMPARATIVE MEASUREMENTS IN MILLIMETRES OF SKULLS OF *MACROPUS GIGANTEUS*; *M. G. TASMANIENSIS*; AND *M. FULLIGINOSUS*.

	Greatest length	Greatest width	Nasal length	Nasal greatest breadth	Nasal least width	Interorbital breadth	Palate length	Diastema	Basi cranial axis	Basi facial axis	Length lower incisor	Breadth lower incisor
<i>Macropus giganteus</i> .												
Australian Museum—												
M 3234 ♀	159	79	64	20	18	93	43	38	100	23	9	
S 1574 ♀	173	87	69	23	15	24	108	53		20.5	6	
S 1000	193	99	87	30	20	30	134	64		24	9	
British Museum ♂	196	108	86	30	18	27	138	67	52.5	145		
<i>Macropus g. tasmaniensis</i> .												
Hobart Museum	193	102	82	25				55				
<i>Macropus fuliginosus</i> .												
Australian Museum—												
2816 ♂	176	112	70	27	19	30	116	55		24	10	
S 1557 ♀	152	92	55	22	14	24	116	43	48	21	10	
Adelaide Museum—												
♂	173	104	64	25	15	28	119	55	49	150	23	10